REMARKS

This Amendment is filed in response to the Office Action dated January 30, 2004, which has a shortened statutory period set to expire April 30, 2004.

Claims 1, 9, and 15 recite in part, "transforming each of said stages into a separate Thevenin equivalent circuit model". As taught by Applicants, the Thevenin equivalent circuit model can take into account the present state of any internal sources and external input. Specification, page 15, lines 22-23. Hence, a sub-circuit's Thevenin equivalent is time-varying and generally needs to be dynamically recalculated at each time step for which the sub-circuit needs to be processed. Specification, page 15, line 23 to page 16, line 1. The sub-circuits within the partition are connected at cut nodes, and once the Thevenin equivalents are computed, the inputs to the partitions are already taken into account and do not enter into further calculations for that time step of the partition. Specification, page 16, lines 1-5.

Applicants respectfully submit that Eisenhofer fails to disclose or suggest this limitation. Notably, the Office Action fails to cite any passage in Eisenhofer that teaches a Thevenin equivalent circuit model or its advantages. Indeed there is not even a single mention of a Thevenin equivalent circuit model in Eisenhofer. Therefore, the statement in the Office Action that the circuit models of Eisenhofer teach a Thevenin equivalent circuit model is unfounded and can only be based on hindsight. Therefore, Applicants request reconsideration and withdrawal of the rejection of Claims 1, 9, and 15.

Claims 2 and 16 are cancelled, thereby rendering the rejection of those claims moot.

Claims 3-8 depend from Claim 1, Claims 10-14 depend from Claim 9, and Claims 17-22 depend from Claim 15. Therefore,

Claims 3-8, 10-14, and 17-22 are patentable for at least the reasons presented for Claims 1, 9, and 15. Based on those reasons, Applicants request reconsideration and withdrawal of the rejection of Claims 3-8, 10-14, and 17-22.

Moreover, Claims 4, 11, and 18 recite in part, "generating a sensitivity vector for a stage". The Office Action cites Eisenhofer at col. 5, line 52 to col. 6, line 28 as disclosing this limitation. Applicants traverse this characterization. This passage describes exemplary simulation environments in an N-way co-simulation paradigm. These environments have nothing to do with generating a sensitivity vector for a stage. Therefore, Applicants request further reconsideration and withdrawal of the rejections of Claims 4, 11, and 18.

Moreover, Claims 5, 12, and 19 recite in part, "computing internal node voltages of a stage based on said sensitivity vector for said stage and said cut node voltages of said stage". The Office Action cites Eisenhofer at col. 5, line 52 to col. 6, line 28 as disclosing this limitation. Applicants traverse this characterization. This passage describes exemplary simulation environments in an N-way co-simulation paradigm. These environments have nothing to do with generating a sensitivity vector for a stage, much less computing internal node voltages of a stage based on the sensitivity vector for the stage and the cut node voltages of the stage. Therefore, Applicants request further reconsideration and withdrawal of the rejections of Claims 5, 12, and 19.

Moreover, Claims 6, 13, and 21 recite in part, "reuses any previously computed static information pertinent to instances of a same cell in order to reduce memory consumption". The Office Action cites Eisenhofer at col. 5, line 52 to col. 6, line 28 as disclosing this limitation. Applicants traverse this characterization. This passage describes exemplary simulation

environments in an N-way co-simulation paradigm. These environments have nothing to do with reusing any previously computed static information pertinent to instances of a same cell in order to reduce memory consumption. Therefore, Applicants request further reconsideration and withdrawal of the rejections of Claims 6, 13, and 21.

CONCLUSION

Claims 1, 3-15, and 17-23 are pending in the present application. Reconsideration and allowance of these claims is respectfully requested.

If there are any questions, please telephone the undersigned at 408-451-5907 to expedite prosecution of this case.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as FIRST CLASS MAIL in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on April 30, 2004.

4/30/2004

Date

Signature: Rebecca A. Baumann

(SN: 09/808,339)